Summaries

UDC 564.714:551.734

Tolokonnikova Z.A.
BRYOZOA DEVELOPMENT OF (BRYOZOA TYPE) ON BORDER OF DEVONIAN–CARBONIFEROUS IN WESTERN PART OF THE ALTAI–SAYANSKAYA FOLDED AREA

The features of brozoa development in Late Devonian and Early Carboniferous time in western part of the Altai-Sayanskaya folded area have been revealed. The position of the bottom border of carbon in the region is paleontologicaly proved by brozoa taking into account the data on conondots and brachiopods.

UDC 551.72:561.2(571.51)

Stanevich A.M., Maksimova E.N., Kornilova T.A., Mazukabzov A.M., Gladkochub D.P.
MICROFOSSILS OF THE LATE PROTEROZOIC DEBENGDINSKAYA SERIES OF THE OLENKENSKIY UPLIFT

Microfossils from the Middle Riphean Debengdinskaya series of the Olenekskiy uplift have been studied. Various stenoorganic forms of acritarchs and cyanobacteries are described. Among acritarchs the morphological groups which are preliminary compared with large flora taxons are allocated: brown and green seaweed, mushrooms, seaweed located in symbiotic attitudes (?) with cyanobionts. The prematurity of radical conclusions about age of the deposit based on majority of Proterozoic microfossils is underlined.

UDC 56:551.73 (571.55+235.222)

Gumerova N.V.
EARLY JIVET RUGOSAS OF THE SALAIR EAST PART

The rugosa complexes of some sections of the Salair Mamontovskiy and Safonovskiy horizons have been selected and monographically described. Descriptions of deposits are given and their age is specified by the rugosa complexes. Monographic descriptions and photos of fauna are applied.

UDC 552.321.6+552.164

Chernyshov A.I., Mishenina M.A.
PETROSTRUCTURAL TYPIFICATION OF THE KANSKIY ZELENOKAMENNIY BELT ULTRAMAFITES (Northwest of the Vostochniy Sayan)

Two types of ultramafites have been established in the Kansk Zelenokamenniy belt (NW of the Vostochniy Sayan): magmatic of the dnodee-wehrlite-picrite composition and restitic of the dnodee-harzburgite composition. They are incorporated in the Kingashskiy and the Idarskiy complexes, accordingly.

UDC 553.411.071:550.4

Kucherenko I.V.
PETROLOGIC–GEOCHEMICAL EVIDENCE OF GEOLOGIC–GENETIC UNIFORMITY OF GOLD HYDROTHERMAL DEPOSITS FORMED IN BLACK–SHALE AND NON–SHALE SUBSTRATUM

The problem of gold deposits origin lying in crystal and black-shale substratum is discussed. The expediency of comparative research of all geologic-real-genetic factors of their formation, among which a significant value is retained by geochemical, is emphasized.

The technique of geochemical researches is based on use of substratum petrologic studying results of golden-ore fields and their frame, providing formation of multilevel system of geochemical selection representing stage-by-stage history of rock formation and their geochemical shape at each stage, is offered.

The results of the offered approach realization in golden-ore deposits of the North Transbaikalia lying in the crystal substratum and Proterozoic black-shale strata in the frame of the Muiskiy ledge of the Archean base of the Siberian craton are presented. The resulted materials prove in geochemical aspect the geologic-genetic uniformity of formed in non-shale and black-shale substratum of gold hydrothermal deposits, proved by the totality of empirical data. The offered technique provides formation of regional, and in the long term global banks of correct geochemical data.

UDC 550.8:553.411

Korobeynikov A.F.
MANTLE MAGMA–THERMOFLUIDODYNAMIC AND INTRACORE GRANITOID–HYDROTHERMAL–METASOMATIC AURIFEROUS SYSTEMS

The content of typical model formation of deep and intra-core ore-forming systems is discussed. As it has been already marked, the interaction between core and mantle ore-forming systems occurred at formation of large and unique golden-ore deposits. Interaction of deep mantle substance with formations of the earth's crust was carried out by penetration of high-temperature gas-fluids, magmatic melts and firm bodies forming diapiric magma-thermofluidodynamic systems on borders of the terrestrial kernel with the bottom mantle and within the limits of the top mantle – the earth's crust.

UDC 553.493.6:528.7 (571.15)

Potseluev A.A., Ananev Yu.S., Annikova I.Yu., Vladimirov A.G., Vasilevskiy A.N., Vitte L.V.
COSMOSTRUCTURAL MODEL OF THE KALGUTINSKIY RARE–METAL DEPOSIT AREA (MOUNTAINOUS ALTAI)

The cosmostructures of the Kalgutinskiy rare-metal deposit area (Mountainous Altai) have been studied on the materials of multispectral space shooting Landsat ETM+ and radar-tracking shooting SRTM. The area is localized inside of the large ring structure of the complex construction, characterized by the long multistage (multipulse) development. Immersing of the structure root (focus) part from the north - northwest to the east - southeast is established. The position of the ring structure is supervised by crossing node of fracture zones of northwest, northeast and northeast - sublatitudinal directions. The Kalgutinskiy granite massif and the deposit itself are located in the internal belt of structure in the ring with 15,2 km in diameter. The perspective of ore-bearing ability of the southeast part of the area is highly evaluated in connection with development of small ring structures of the second type.

UDC 552.5 (571.51)

Stolbova N.F., Bether O.V., Kiselev Yu.V., Krinin V.A.
LITHOGENESIS OF THE VEND–CAMBRIAN DEPOSITS OF THE SOUTHWEST SLOPE OF THE BAIKITINSKAYA ANTECLASE (BY RESULTS OF SECTION STUDYING OF THE IRINCHIMINSKAYA PARAMETRICAL WELL 155 IN EAST SIBERIA)

The results of studying of sedimentation conditions and the subsequent diagenetic, catagenetic and imposed epigenetic rock transformations in the section have been examined. The display of rock epigenetic breeds and bitumoid spreading in the section point to the territory perspectivity and oil-gas-bearing ability.

UDC 552.5:550.8(571.16)

Ezhova A.V.
APPLICATION OF THE SYSTEM ANALYSIS FOR PARTITION AND CORRELATIONS OF THE JURASSIC TERRIGENOUS SECTIONS ON HYDROCARBON DEPOSITS OF TOMSK AREA

The results of interpretation of the logging diagrams complex for lithologic characteristics of the terrigenous section and allocation of marking horizons (datums) have been considered. The chronostratigraphic divisions in volume of the Middle Upper Jurassic strata on wells of the Aleksandrovskiy, Srednevasuganskiy, Pudinskiy and Kazanskiy oil-bearing areas of south west of the West-Siberia province are examined. The conclusion is drawn that the method of system analysis of rock associ-

ations allows carrying out correlation of polyfacies sedimentary strata, tracing in time the integral systems of various rank (geochronolites).

UDC 553.98.061.4.001.8

Bocharov E.I., Stolbov Yu.M.
ESTIMATION OF POSTSEDIMENTATIONAL PROCESS INFLUENCE ON FILTRATION-CAPACITOR PROPERTIES OF CHALKY DEPOSITS OF THE WESTERN SIBERIA NORTH

The dependences between petrophysical parameters: porosity, volumetric density, permeability and lithochemical characteristics: content of uranium, alumina and value of the U/Al_2O_3 module, have been examined on the example of Creataceous age productive deposits opened by the Pestsovaya well 209 on territory of the Yamalo-Nenetskiy autonomous region. Values of correlation coefficients between volumetric density and alumina content, and also open porosity and alumina content allow estimating the intensity of secondary mineral formation in collector rocks.

UDC 550.242.122 + 551.762(571)

Belozyorov V.B.
PALEOGRAPHIC FEATURES OF PETROLIFEROUS LAYERS FORMATION OF THE VASYUGAN SERIES OF THE WESTERN SIBERIA

It has been shown that active tectonic nodes present within the Western Siberian Plate and associated with re-formation of a spatial wavefield with the periodicity of 18 mln years influences paleogeomorphological peculiarities of the sedimentary basin and controls the locations of Upper Jurassic source area. Paleogeographic schemes for the formation time of particular J1 sandstones of the Vasyugan series have been built for the first time.

UDC 550. 361:553.982

Yashchenko I.H.
INTERRELATION OF VISCOUS OIL PROPERTIES AND THE THERMAL STREAM LEVEL IN TERRITORIES OF THE VOLGO-URALSKIY, WEST SIBERIAN AND TIMANO-PECHORSKIY POOLS

Changes of viscous oil basic properties of the Volgo-Uralskiy, Western Siberia and Timano-Pechorskiy oil-gas-bearing pools Волго depending on thermal stream level have been investigated. The analysis of thermal stream spatial distribution on level in territory of pools is conducted. Dependence between thermal stream level and oil viscosity is established. It is shown that oil viscosity decreases with increase in thermal stream level. Interrelations between different content of sulfur, paraffin, pitches and asphaltenes in oils and thermal stream level are studied. It is shown that with increase of thermal stream level the content of sulfur, pitches and asphaltenes decreases and the content of paraffins increases.

UDC 553.94(571.5):553.078

Arbuzov S.I.
METAL-BEARING ABILITY OF SIBERIA COALS

The results of long-term researches of Siberia coals metal-bearing ability have been generalized. The geochemical specialization of coal basins and deposits is acertained. It is established that coals of Siberia are perspective on revealing of commercial deposits Au, Sc, Ge and lithophylic rare metals (Zr, Hf, Y, Nb, Ta, U and lanthanoids). The evaluation of perspectives of rare metal resources industrial development in coal and waste of their use in the region is executed.

UDC 550.4.08:553.411

Voroshilov V.G.
TO THE QUESTION ON GEOMETRIZATION OF ABNORMAL STRUCTURES OF GEOCHEMICAL FIELDS OF HYDROTHERMAL ORE DEPOSITS

Possibilities of various mathematical methods at geometrization of abnormal geochemical fields of ore deposits are discussed. Peculiarities of application for the decision of these problems of linear and nonlinear methods of image recognition of: the discriminantal analysis, the method of plural regress, artificial neural networks, are considered on the specific example. Conditions of optimum use of the named methods are ascertained. The opportunity of use of secondary aureoles mapping data for identification of the primary abnormal geochemical field structure is shown.

UDC 553.98:550.83

Sobolev I.S.
RADIOGEOCHEMISTRY METHODS AT SURFACE SEARCHES OF OIL AND GAS DEPOSITS

The review of condition of radiogeochemical methods of oil and gas deposit searches has been given. The possible reasons of radiogeochemical anomalies formation are considered, some approaches at interpretation of radiogeochemical data are cited.

UDC 622.02

Lukyanov V.G., Tretenkov I.V.
RESEARCH OF GEOMECHANICAL FACTORS INFLUENCE AND METHOD DEVELOPMENT OF STABILITY INCREASE OF ROCK EXPOSURE IN CONDUCTED HORIZONTAL MOUNTAIN DEVELOPMENTS

The questions of geomechanical factors influence on rock exposure stability in working area of conducted mountain developments at the moment of their execution have been considered and methods allowing raising their stability are cited.

UDC 550.46

Shvartsev S.L.
BASIC PROCESSES AND MECHANISMS OF EVOLUTIONARY DEVELOPMENT OF THE SYSTEM WATER-ROCK

The new concept about presence in an inert matter of progressive evolution and self-organizing is elaborating, internal mechanisms and processes which provide such development are opened. It is shown that the system water-rock corresponds to these requirements very sufficiently.

UDC 550.42:577.4(571.1)

Lohanova Yu.Yu., Rasskazov N.M.
FORMS OF CHEMICAL ELEMENTS MIGRATION IN UNDERGROUND WATERS OF THE RIVER KATUN BASIN IN ITS AVERAGE CURRENT

The characteristic of chemical elements condition of the river Katun (Mountainous Altai) basin underground waters has been sited, basic forms of chemical macro-and microelements migration: Na^+, Mg^{2+}, Ca^{2+}, Mn^{2+}, Fe^{2+}, Pb^{2+}, Cu^{2+}, Zn^{2+} are allocated. Statistical calculations which purpose was confirmation of complex-formation processes modeling results are sited.

UDC 550.42:57.4(571.1)

Savichev O.G.
MATHEMATICAL MODELING AND FORECAST OF FLUVIAL DEFORMATIONS OF THE RIVER TOM WITHIN TOMSK CITY LIMITS. (WESTERN SIBERIA)

The mathematical model of river Tom channel deformations within Tomsk city limits on part of the river 74,8...58,3 km from the mouth has been developed and tested. The distribution on length of the river of the floor vertical deformation intensity, expenditure of traction and weighed deposits is established for the periods of high, average and small water content. It is shown that at preservation of natural-anthropogenous formation conditions of the firm drainage of the Tom river within Tomsk city limits, formed in 2003–2006, the certain regress in the nearest decade of floor marks and further formation of island in the southern part of the city is possible. The estimation of floor-deepening works in the Tom river is executed and the forecast of fluvial deformations is also given at various variants of anthropogenous influence on the stream is also given.

UDC 574:539.1.04

Rihvanov L.P., Zamyatina Yu.L., Arhangelskaya T.A.
RADIOGRAPHIC RESEARCHES IN RADIOECOLOGICAL MONITORING

The possibilities of one of radiographic methods - the method of fragmental radiography for estimation of radioecological condition of

territories which are characterized by various sources of technogenic and natural radiating loading are considered.

UDC 550.42;546.7:504.05/63

Rihvanov L.P., Arbuzov S.I., Baranovskaya N.V., Volostnov A.V., Arhangelskaya T.A., Mezhibor A.M., Berchuk V.V., Zhornyak L.V., Zamyatina Yu.L., Ivanov A.Yu., Talovskaya A.V., Shatilova S.S., Yazikov E.G.
RADIOACTIVE ELEMENTS IN ENVIRONMENT

The indicating role of natural radioactive elements (U, Th) in geosphere shells and various environment components is discussed, and also the problems of technogenic radionuclides are considered.

UDC 550.84:550.461(571.1)

Andreeva M.P., Domrocheva E.V.
ECOLOGIC-GEOCHEMICAL CONDITION OF NATURAL WATERS OF THE ACTIVE WATER EXCHANGE ZONE OF THE KUZBAS SOUTH

Pollution of surface and underground waters of the active water exchange zone of the Kuzbas south has been considered. The level estimation of natural waters modern condition is conducted based on the materials of five years researches. The conformity of investigated waters of maximum concentration limit is ascertained. The main contaminants of natural waters are revealed.

UDC 551.586;502.5/8

Talanov E.A.
MAPPING OF ECOLOGIC-ECONOMIC RISK ON EROSION-DANGEROUS TERRITORIES

The erosive processes and the mudflow phenomena can cause severe social and ecological damage, therefore zoning by risk degree serves as information basis for wildlife management.

UDC 550.3(571) (09)

Domarenko V.A., Rihvanov L.P.
ESSAYS ON HISTORY OF STUDYING OF THE RADIO-ACTIVITY AND DEVELOPMENT OF URANIUM GEOLOGY IN CENTRAL SIBERIA. THE FIRST SKETCH. BEGININGS

The history of radio-activity and radioactive elements studying totals more than hundred years. Interest to uranium in the beginning of the XX century was defined, first of all, by cost of its disintegration product – radium which at the earliest stage was applied in medicine and research purposes. The brief review of history of studying of radio-activity and development of uranium geology in Central Siberia is given. The unknown before pages of this history are cited.